

Amendment and Response

Applicant: Elisa M. Cross

Serial No.: 10/017,268

Filed: December 14, 2001

Docket No.: 57013US002

Title: TOUCH PANEL SPACER DOTS AND METHODS OF MAKING

**RECEIVED
CENTRAL FAX CENTER****JAN 05 2007****AMENDMENTS TO THE CLAIMS**

Please add claims 52-56.

Please amend claim 1 as follows.

The following Listing of Claims will replace all prior versions and listings of claims in the application:

Listing of Claims

1. (Currently Amended) A method for making a touch activated user input device comprising:
 - providing a first substrate comprising a first conductive coating;
 - ink jet printing a plurality of dots on the first conductive, each of the dots including nanoparticles;
 - hardening the dots to form spacers adhered to the first substrate; and
 - placing a second substrate comprising a second conductive coating over the first substrate such that the spacers maintain a distance between the first and second substrates to prevent detection of a touch location when no external force is applied and allow detection of a localized touch location when a sufficient localized external force is applied between the first and second substrates.
2. (Original) The method of claim 1, wherein the dots comprise a nanocomposite comprising surface-modified inorganic nanoparticles.
3. (Original) The method of claim 2, wherein the surface-modified inorganic nanoparticles include silica nanoparticles.
4. (Original) The method of claim 2, wherein the nanoparticles are present in an amount of about 5% or more by weight of the nanocomposite.

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5. (Original) The method of claim 2, wherein the nanoparticles are present in an amount of about 10% to 40% by weight of the nanocomposite.
6. (Original) The method of claim 2, wherein the nanoparticles have an average diameter in a range of about 10 to 30 nm.
7. (Original) The method of claim 2, wherein the nanocomposite further comprises hexanediol diacrylate.
8. (Original) The method of claim 1, wherein the step of ink jet printing a plurality of dots comprises ink jet printing a heated gel composition.
9. (Original) The method of claim 8, wherein the gel composition comprises a nanocomposite gel.
10. (Original) The method of claim 9, wherein the nanocomposite gel composition comprises surface-modified silica nanoparticles dispersed in an energy curable fluid vehicle.
11. (Original) The method of claim 10, wherein the energy curable fluid vehicle comprises hexanediol diacrylate.
12. (Original) The method of claim 10, wherein the silica nanoparticles are present in an amount of about 5% or more by weight of the nanocomposite gel.
13. (Original) The method of claim 10, wherein the silica nanoparticles are present in an amount of about 10% to 40% by weight of the nanocomposite gel.

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14. (Original) The method of claim 10, wherein the silica nanoparticles have an average diameter of about 10 to 30 nm.
15. (Original) The method of claim 1, wherein the first and second conductive coatings each comprise a transparent conductive coating.
16. (Original) The method of claim 1, wherein the spacer dots have heights of about 2 microns or more and have height to diameter aspect ratios of about 1:10 or more.
17. (Original) The method of claim 1, wherein the step of ink jet printing comprises ink jet printing a material onto a pre-existing dot.
18. (Original) The method of claim 1, further comprising associating the touch activated user input device with an electronic display.
- 19-43. (Withdrawn)
- 44-48. (Cancelled)
49. (Withdrawn)
- 50-51. (Cancelled)
52. (New) A method for making a touch activated user input device comprising:
providing a first substrate comprising a first conductive coating;
ink jet printing a gel composition to define a plurality of dots on the first conductive coating;
hardening the dots to form spacers adhered to the first substrate; and

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placing a second substrate comprising a second conductive coating over the first substrate such that the spacers maintain a distance between the first and second substrates to prevent detection of a touch location when no external force is applied and allow detection of a localized touch location when a sufficient localized external force is applied between the first and second substrates.

53. (New) The method of claim 52, wherein the gel composition comprises a nanocomposite gel including nanoparticles dispersed in an energy curable fluid vehicle.

54. (New) The method of claim 53, wherein the nanoparticles comprises surface-modified silica nanoparticles.

55. (New) The method of claim 53, wherein the nanoparticles have an average diameter in a range of about 10 to 30 nm.

56. (New) The method of claim 52, wherein the gel composition comprises hexanediol diacrylate.